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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/828,520	04/06/2004	Nicholas Francis Fell JR.	ARL 04-06	4315

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EXAMINER
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BOWERS, NATHAN ANDREW

ART UNIT	PAPER NUMBER
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1744

DATE MAILED: 08/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/828,520	Applicant(s) FELL ET AL.	
	Examiner Nathan A. Bowers	Art Unit 1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 June 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 1-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 25-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election with traverse of Group II, claims 25-31 in the reply filed on 8 June 2006 is acknowledged. The traversal is on the ground(s) that the method of Group I can only be performed in the claimed system of Group II. This is not found persuasive because there is no mention of a flowpath or flow cell in the method claims, even though these features are required in the apparatus claims. This indicates that the method could be practiced in systems that are not reliant on an optical flow cell. Furthermore, the claimed system could be used by another material different method, and not just by the method set forth in Group I. The claimed system does not require a step for determining the presence of a marker chemical prior to a step in which the marker chemical is complexed with a marker chemical complexing agent.

The requirement is still deemed proper and is therefore made FINAL.

Claims 1-24 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 8 June 2006.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1) Claims 25-29 are rejected under 35 U.S.C. 102(e) as being anticipated by

Floriano (US 20060079000).

Floriano discloses a bacterial endospore detection system comprising an optical detection device (Figure 3:250) that includes a flow cell. Flow paths are provided for moving samples to and from the optical detection device. A sampler in the form of a sample input is additionally provided. This is apparent from Figure 3 and paragraphs [0058], [0059] and [0079]-[0081]. Paragraphs [0059] and [0069] state that the detection device includes a computer system capable of analyzing data obtained from the detector. Floriano discloses the use of reservoirs (Figure 3:r1, r2, r3) that are in fluid communication with the optical detection device and flow cell. Although not expressly stated, these reservoirs are fully capable of holding marker chemical complexing agents, marker chemical enhancement agents, and release agents. In paragraph [0066], Floriano indicates that it is known in the art to add complexing agents to the detection area to enhance visualization. In paragraph [0127], Floriano states that it is known to react terbium with dipicolinic acid produced by spores to create a luminescent complex.

2) Claims 25 and 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Vanderberg (US 6599715).

Vanderberg discloses a bacterial endospore detection system comprising an optical detection device that further includes a flow cell (Figure 2:22). The optical detection device additionally comprises a light source (Figure 2:26) and a photodetector (Figure 2:28). A flowpath (Figure 2:14) fluidly connects a sampler to the flow cell. This is described in column 2, lines 31-55 and column 4, line 56 to column 5, line 5.

Vanderberg additionally discloses a marker chemical complexing agent reservoir in which terbium nitrate is stored. This reservoir is fluidly connected to the flow cell so that terbium ions are allowed to complex with dipicolinic acid produced by spores in a sample solution.

3) Claims 25, 26 and 28-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Muller (US 5804384).

With respect to claims 25 and 26, Muller discloses an analyte detection system that comprises an optical detection device that includes a flow cell (Figure 1:18). A laser (Figure 2:54) and a photodetector (Figure 2:56) are provided for determining the presence of a target molecule in a sample. A syringe (Figure 1:22) works as a sampler since it is used to deliver analytes to the detection device via a flowpath (Figure 1:28). Muller additionally states that a reservoir (Figure 1:34) is provided for holding marker chemical complexing agents. Muller teaches that the complexing agents, in the form of detector probes, selectively bind to analytes in order to aid in their detection. This is

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disclosed in column 8, line 55 to column 9, line 63. Column 10, lines 14-18 indicate that the system is useful in the detection of various bacterial microorganisms.

With respect to claims 28 and 29, Muller discloses the apparatus in claim 25 wherein a plurality of fluid reservoirs (Figure 1:30, 32, 34) are provided. Although not expressly stated, any of these reservoirs are fully capable of accommodating a marker chemical enhancement agent or a release agent.

With respect to claims 30 and 31, Muller discloses the apparatus in claim 25 wherein the flowpath includes a heated mixing zone (Figure 1:20). A heater (Figure 1:36) produces a temperature in the zone that facilitates mixing and binding between analytes and complexing agents. This is disclosed in column 9, lines 5-25.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Ponce (US 20040014154) reference discloses the state of the art regarding bacterial endospore detection systems.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan A. Bowers whose telephone number is (571) 272-8613. The examiner can normally be reached on Monday-Friday 8 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys Corcoran can be reached on (571) 272-1214. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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